Listing of the Claims

This listing of the claims replaces all prior versions and listings of claims in the application.

1. (Currently amended) A method of oxidizing an organic compound present in soil, groundwater, process water or wastewater said method comprising contacting the organic compound with a composition comprising a persulfate, and a chelated metal catalyst composed of divalent or trivalent cationic species of ~~a transition metal~~ iron.

2. (Previously presented) A method as in claim 1, wherein the organic compound is present in soil, groundwater, or wastewater.

3. (Original) A method as in claim 1, wherein the organic compound is selected from the group consisting of volatile organic compounds, semi-volatile organic compounds, polyaromatic hydrocarbons, polychlorobiphenyls, pesticides and herbicides.

4. (Previously presented) The method as in claim 1, wherein the persulfate is a dipersulfate.

5. (Original) The method as in claim 4, wherein the dipersulfate is selected from sodium, potassium or ammonium persulfate or a combination thereof.

6. (Previously presented) The method as in claim 1, wherein the persulfate is a monopersulfate.

7. (Original) The method as in claim 6, wherein the monopersulfate is selected from sodium and potassium monopersulfate.

8. (Previously presented) The method as in claim 1, wherein the persulfate is a combination of a dipersulfate and monopersulfate.

9. (Cancelled) The method as in claim 1, wherein the transition metal is iron.

10. (Original) The method as in claim 9, wherein the iron is divalent.

11. (Original) The method as in claim 9, wherein the iron is trivalent.

12. (Previously Presented) The method as in claim 1, wherein the metal catalyst is chelated with ethylenediaminetetraacetic acid.

13. (Deleted) The method as in claim 1, wherein the amount of chelating agent is equal to at least the stoichiometric amount to chelate all of the transition metal.

14. (Previously presented) The method as in claim 1, wherein the amount of chelated metal catalyst is sufficient to deliver an equivalent amount of transition metal in the range of 1 – 1000 ppm.

15. (Previously presented) The method as in claim 1, wherein the amount of persulfate is sufficient to satisfy the soil oxidant demand and to oxidize substantially all of the organic compound.

16. (Previously presented) The method as in claim 1, wherein the chelated metal catalyst and the persulfate are added in combination.

17. (Previously presented) The method as in claim 1, wherein the chelated metal catalyst and the persulfate are added sequentially.

18. (Previously presented) The method as in claim 1, wherein the metal catalyst is chelated with citrate.

19. (New) A method of oxidizing an organic compound present in soil or groundwater, said method comprising contacting the organic compound with a composition comprising a persulfate, and a chelated metal catalyst composed of divalent or trivalent cationic species of a transition metal.

20 (New) A method as in claim 19, wherein the organic compound is selected from the group consisting of volatile organic compounds, semi-volatile organic compounds, polyaromatic hydrocarbons, polychlorobiphenyls, pesticides and herbicides.

21. (New) The method as in claim 19, wherein the persulfate is a dipersulfate.

22. (New) The method as in claim 21, wherein the dipersulfate is selected from sodium, potassium or ammonium persulfate or a combination thereof.

23. (New) The method as in claim 19, wherein the persulfate is a monopersulfate.

24. (New) The method as in claim 23, wherein the monopersulfate is selected from sodium and potassium monopersulfate.

25. (New) The method as in claim 19, wherein the persulfate is a combination of a dipersulfate and monopersulfate.

26. (New) The method as in claim 19, wherein the transition metal is iron.

27. (New) The method as in claim 26, wherein the iron is divalent.

28. (New) The method as in claim 26, wherein the iron is trivalent.

29. (New) The method as in claim 19, wherein the metal catalyst is chelated with ethylenediaminetetraacetic acid.

30. (New) The method as in claim 19, wherein the amount of chelated metal catalyst is sufficient to deliver an equivalent amount of transition metal in the range of 1 – 1000 ppm.

31. (New) The method as in claim 19, wherein the amount of persulfate is sufficient to satisfy the soil oxidant demand and to oxidize substantially all of the organic compound.

32. (New) The method as in claim 19, wherein the chelated metal catalyst and the persulfate are added in combination.

33. (New) The method as in claim 19, wherein the chelated metal catalyst and the persulfate are added sequentially.

34. (New) The method as in claim 19, wherein the metal catalyst is chelated with citrate.